

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

ASSURED GUARANTY MUNICIPAL CORP., f/k/a
FINANCIAL SECURITY ASSURANCE INC.

Case No. 11-CV-2375 (JSR)

Plaintiff,

vs.

FLAGSTAR BANK, FSB; FLAGSTAR CAPITAL
MARKETS CORPORATION; and FLAGSTAR ABS,
LLC,

DECLARATION OF
NELSON R. LIPSHUTZ

Defendants.

1. I, Nelson R. Lipshutz, submit this Declaration in response to the arguments made in Defendants' Memorandum of Law in support of their Motion to Exclude Plaintiff's Experts' Testimony (Flagstar's "Memorandum").

2. Flagstar seeks to exclude my report on the ground that the two samples of loans I constructed were not representative of the overall population of loans. Flagstar claims that the sample is not representative because in constructing the sample I did not take into account the specific characteristics of either loan payment status or original principal balance. (Memorandum at 11-13.) These conclusions are grossly incorrect.

3. In constructing the samples AGM used in this case, I did not need to take *any* specific characteristics into account in constructing the samples, *because the samples are simple random samples.*

4. A simple random sample is unbiased because it selects members with equal probability irrespective of their specific characteristics. This means that the sample is

constructed in a manner which avoids over-representing or under-representing any characteristic of the population being sampled.

5. My analyses of the comparative distributions of various characteristics in the overall population and in the sample (e.g., geographic distribution and unpaid loan balance) were performed *after* the sample had been constructed. They had nothing to do with the way in which the sample was constructed. These analyses were intended to illustrate and confirm that the samples were representative of the loan populations—which, in fact, they did—not to create the sample in the first instance. A simple random sample is inherently unbiased, and is appropriate for estimating the fraction of a population exhibiting *any* characteristic, including both payment status and original principal balance.

6. The size of the sample needed to estimate the proportion of members of a population exhibiting any characteristic is given by the standard formula¹

$$n = \frac{Np(1-p)}{(N-1)\left(\frac{d^2}{z^2}\right) + p(1-p)}$$

where

n = required sample size

N = number of members of population

α = the confidence limit

z = the upper $\alpha/2$ point of the normal distribution

p = the population proportion

d = the half width of the confidence interval

¹ See, for example, Steven K. Thompson, "Sampling – Second Edition," Wiley Series in Probability and Statistics, John Wiley and Sons, New York, 2002, pp. 41 to 42

The population proportion p is unknown before any measurements have been made. However, n takes on its maximum value when $p = 0.5$. This means that a sample size sufficient to estimate a proportion of 0.5 is more than adequate to estimate any other proportion to the required certainty with a given confidence level.

7. In the instant case, I desired to achieve a confidence level α of 95%, and to limit the uncertainty of the proportion to ± 0.05 . The corresponding values of the parameters are

N = population size = 10,025 for pool 2005-1 and 5,112 for pool 2006-1

α = the confidence limit = 0.05 (i.e., 1 – 95%)

z = the upper $\alpha/2$ point of the normal distribution = 1.96

p = the population proportion = 0.5 (produces the largest possible required sample size)

d = the half-width of the confidence interval = 0.05

With these parameters, the required sample size is at most 371 for pool 2005-1 (which is the formula result of 370.02 rounded up to the nearest integer) or 358 for pool 2006-1 (which is the formula result of 357.37 rounded up to the nearest integer). The sample size of 400 which I selected is larger than the sample size required to accurately estimate the sample proportion of loans with *any* characteristic, including payment status and original principal balance. (Notably, Flagstar makes no suggestion that either sample misstates to a statistically significant degree the incidence of default or the average original principal balance of either loan population.)

8. The random samples that I constructed are representative of the loan populations in each securitization and therefore provide a sound basis for assessing the degree to which Flagstar breached its contractual obligations and for calculating the damages suffered by AGM.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.



Dr. Nelson R. Lipshutz